Article 34

**CLAIMS**

1. A topical composition for mutual enhancement of transdermal permeation of at least first and second pharmacologically active agents, the composition comprising an emulsion of at least one discontinuous phase in a continuous phase, the or each discontinuous phase including a eutectic mixture of first and second pharmacologically active agents and the continuous phase being provided by a pharmaceutically acceptable carrier, the eutectic mixture having a melting point below 40°C; and at least one compatible emulsifying agent, with the proviso that the at least first and second pharmacologically active agents are each not local anaesthetics.

2. A topical composition according to Claim 1, in which the first pharmacologically active agent has a melting point between 35 and 75°C, preferably 40-50°C, and the second pharmacologically active agent has a melting point between -40°C and 150°C, preferably between -5 and 90°C.

3. A topical composition according to Claim 1 or 2, in which the topical composition additionally includes, in the eutectic mixture, a third pharmaceutically acceptable component.

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4. A topical composition according to Claim 3, in which the third pharmaceutically acceptable component has a melting point between 40 and 150°C, preferably between 40 and 75°C.

5. A topical composition according to Claim 3 or 4, in which the third component is a third pharmacologically active agent.

6. A topical composition according to any one of Claims 3-5, in which the topical composition additionally includes, in the eutectic mixture, a fourth pharmaceutically acceptable component.

7. A topical composition according to Claim 6, in which the fourth pharmaceutically acceptable component has a melting point between 40 and 150°C, preferably between 40 and 75°C.

8. A topical composition according to Claim 6 or 7, in which the fourth component comprises a fourth pharmacologically active agent.

9. A topical composition according to any one of the preceding claims, in which said at least one discontinuous phase contains no co-solvent or additional oil phase, so that the eutectic mixture substantially, preferably essentially, comprises the or each discontinuous phase of the emulsion.

10. A topical composition according to any one of the preceding claims, in which the first pharmacologically active agent is selected from triclosan, chlorocresol, chlorbutanol, methyl nicotinate, triprolidine, promethazine, trimeprazine, sulfiram, oxybutynin, capsaicin, testosterone enanthate or choline salicylate.

11. A topical composition according to any one of the preceding claims, in which the second pharmacologically active agent is selected from triclosan; chlorocresol, capsaicin, trimeprazine, choline salicylate, methyl nicotinate; non-steroid anti-inflammatory agents selected from arylpropionic acid derivatives such as ibuprofen, ketoprofen, fenoprofen and flurbiprofen; aryl acetic acid derivatives such as etodolac; and arylcarboxylic acids; narcotic analgesics such as fentanyl; anti-fungal agents such as econazole and ketoconazole; antibacterial agents such as mupirocin, chlorbutanol, clindamycin and iodine; anticholinergics such as oxybutynin; anthelmintics such as tetramisole; antihistaminics such as triprolidine and promethazine and antihypertensives such as propranolol.

12. A topical composition according to Claim 5 or 8, in which the third and fourth pharmacologically active agents are each selected from triclosan; chlorocresol; capsaicin, trimeprazine, choline salicylate, methyl



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nicotinate; non-steroid anti-inflammatory agents selected from arylpropionic acid derivatives such as ibuprofen, ketoprofen, fenoprofen and flurbiprofen; aryl acetic acid derivatives such as etodolac; and arylcarboxylic acids; narcotic analgesics such as fentanyl; anti-fungal agents such as econazole and ketoconazole; antibacterial agents such as mupirocin, chlorbutanol, clindamycin and iodine; anticholinergics such as oxybutynin; antihypertensives such as propranolol; antihistaminics such as triprolidine and promethazine; and anthelmintics such as tetramisole.

13. A topical composition according to Claim 3 or 4, in which the third component is a pharmaceutically acceptable component selected from lauric acid, stearyl alcohol, menthol, thymol, cinnamic acid or an ester thereof.

14. A topical composition according to any one of the preceding claims, in which the pharmaceutically acceptable carrier is substantially hydrophilic, said carrier containing substantially, preferably essentially, water as the continuous phase.

15. A topical composition according to any one of the preceding claims, in which the pharmaceutically acceptable carrier contains at least one gelling or suspension agent.

16. A topical composition according to Claim 15, in which the gelling or suspension agent is selected from carbomers, modified cellulose derivatives, naturally-occurring, synthetic or semi-synthetic gums such as xanthan gum, acacia and tragacanth, modified starches, co-polymers such as those formed between maleic anhydride and methyl vinyl ether, colloidal silica and methacrylate derivatives or a mixture thereof.

17. A topical composition according to any one of the preceding claims, in which the topical composition is in the form of a gel, lotion, suspension, cream, aerosol spray, transdermal patch, medicated dressing or soft gelatin capsule.

18. A topical composition according to any one of the preceding claims, in which the emulsifying agent is selected from non-ionic, cationic and anionic surfactants.

19. A topical composition according to Claim 18, in which the emulsifying agent is a non-ionic surfactant.

20. A topical composition according to any one of the preceding claims, in which the at least two pharmacologically active agents are structurally and/or pharmacologically diverse.

21. Use of a topical composition comprising an emulsion of at least one discontinuous phase in a continuous phase, the or each discontinuous phase including a eutectic mixture of at least first and second pharmacologically active agents and the continuous phase being provided by a pharmaceutically acceptable carrier, the eutectic mixture having a melting point below 40°C; and at least one compatible emulsifying agent, with the proviso that the at least first and second pharmacologically active agents are each not local anaesthetics, for mutual enhancement of transdermal permeation of the at least first and second pharmacologically active agents.

22. Use of an emulsion of at least one discontinuous phase in a continuous phase, the or each discontinuous phase including a eutectic mixture of at least first and second pharmacologically active agents and the continuous phase being provided by a pharmaceutically acceptable carrier, the eutectic mixture having a melting point below 40°C; and at least one compatible emulsifying agent, with the proviso that the at least first and second pharmacologically active agents are each not local anaesthetics, for the manufacture of a topical composition for mutual enhancement of dermal permeation of the at least first and second pharmacologically active agents.

23. A method for mutual enhancement of dermal permeation of at least first and second pharmacologically active agents, the method comprising applying a topical composition for mutual enhancement of transdermal permeation of at least first and second pharmacologically active agents, the composition comprising an emulsion of at least one discontinuous phase in a continuous phase, the or each discontinuous phase including a eutectic mixture of first and second pharmacologically active agents and the continuous phase being provided by a pharmaceutically acceptable carrier, the eutectic mixture having a melting point below 40°C; and at least one compatible emulsifying agent, with the proviso that the at least first and second pharmacologically active agents are each not local anaesthetics, to an accessible body surface.

24. A topical composition according to any one of the preceding claims in which the eutectic mixture of at least two pharmacologically active agents is selected from the group consisting of ibuprofen - methyl nicotinate, oxybutynin - chlorbutol, triclosan - oxybutynin, methyl cinnamate - oxybutynin, chlorobutol - testosterone enanthate, methyl nicotinate - ketoprofen, triclosan - econazole, sulfiram - levamisole, promethazine - triclosan, promethazine - benzocaine and ketoprofen - benzocaine.

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